

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

BARRDAY, INC., et al.,

Plaintiffs,

Decision & Order
15-CV-165-LJV-JWF

v.

LINCOLN FABRICS INC.,

Defendant.

INTRODUCTION

Plaintiffs Barrday, Inc. and Barrday Corp. (collectively, "Barrday") bring this patent infringement action against Lincoln Fabrics Inc. ("Lincoln"). Docket ## 1, 18. The parties both develop ballistic fabrics for use in soft body armor. Barrday alleges that Lincoln infringed on two of its patents – Patent No. 8,573,261 ("the '261 patent") and its continuation patent, Patent No. 9,127,379 ("the '379 patent"). The two patents concern "woven, multi-layer fabrics for use in ballistic applications." Docket # 32 at 8.

Pursuant to Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996) ("Markman"), both parties moved to have the Court construe disputed claims of the '261 and '379 patents.¹ On May 4, 2021, the parties jointly presented tutorial for the Court on the

¹ The parties have consented to magistrate-judge jurisdiction before the undersigned for purposes of claim construction. See Docket ## 57, 58.

weaving technology relevant to the patents. Thereafter, on June 2, 2021, a Markman hearing was held and the parties set forth their respective positions as to how the disputed claim terms should be construed.

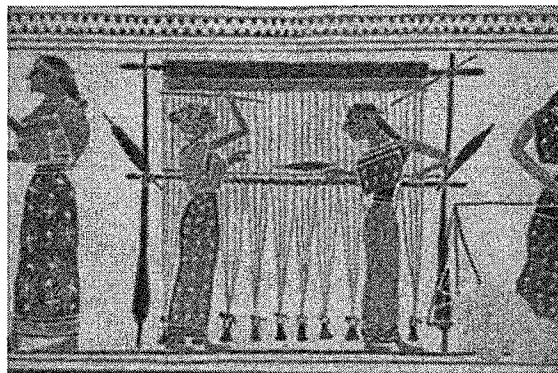
After careful consideration of the presentations of counsel and the briefs submitted by the parties, the Court sets forth below its conclusions of law with respect to the interpretation of the central disputed term – “securing yarns.” For the reasons discussed below, the Court will not construe the other disputed terms at this time.

BACKGROUND

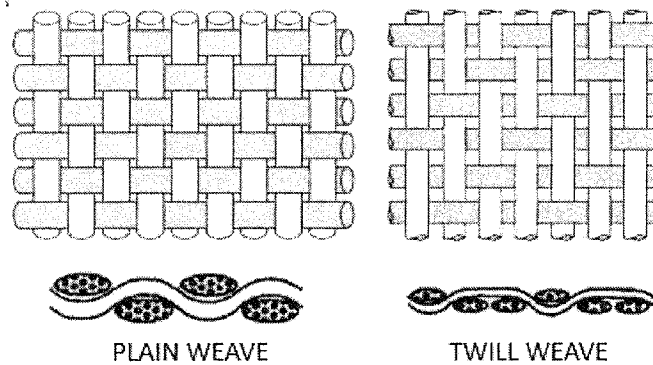
I. The Weaving Process for Ballistic Fabrics²: Barrday and Lincoln are competitors. Both manufacture high-performance fabrics that can be fabricated into products like soft body armor to protect against ballistic or other threats. Barrday and Lincoln occupy the same niche within the manufacturing process: both obtain high-performance yarn from other suppliers, weave those yarns into fabrics, and sell those fabrics to others, who then use the fabrics to fashion final products.

² The facts and images contained in this section are based on and derived from the parties' presentations at the tutorial.

As the parties explained during the tutorial, the process of weaving yarns into a singular fabric is, at its core, an ancient technique. A set of yarns – known as warp yarns – are placed side by side for a specified length. The warp yarns are held under tension with a loom. Below is an illustration of a loom holding warp yarns:



Another set of yarns – known as weft yarns – are then weaved through and across the warp yarns so as to interlace with them. Depending on the weaving pattern, different types of weaves can be made, like a plain weave or a twill weave (warp yarns in white, weft in gray):



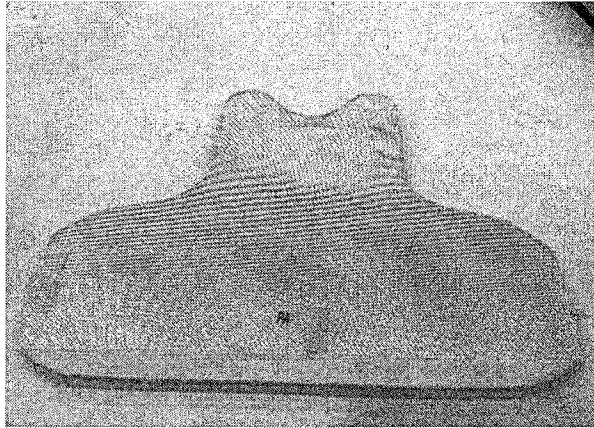
The intended result of this process is a cohesive fabric made up of warp and weft yarns. As explained in the '261 patent:

Woven fabrics are fabrics in which two distinct sets of yarns are interwoven with each other to form the fabric. Typically, woven fabrics include warp yarns that run lengthwise along the fabric and weft yarns that run across the length of the fabric, and which are interwoven with and generally perpendicular to the warp yarns.

'261 patent, col. 1, lines 21-26. Today, advanced machines are used to weave the warp and weft yarns together into a fabric, but the same weaving principles generally apply.

Barrday and Lincoln sell more than just single layers of fabric. They also combine single layers together to form multilayer fabrics, which they then sell to downstream manufacturers. Single woven layers can be combined through several methods. Two separately manufactured layers can be joined together with a resin or through stitching, or they can be woven together during the weaving process itself. Multiple-layered fabrics are particularly helpful in the field of soft body armor, since an end

product may require dozens of layers. Below is an armor panel consisting of forty layers of woven material:



All the design choices Barrday and Lincoln make — from the type of yarn or weave to the method of combining layers together — influence the cost and efficacy of a ballistic fabric. Indeed, Barrday's patents claim a multilayer fabric that is manufactured in such a way as to provide better "ballistic performance as well as manufacturing advantages." '261 patent, col. 2, lines 63-64.

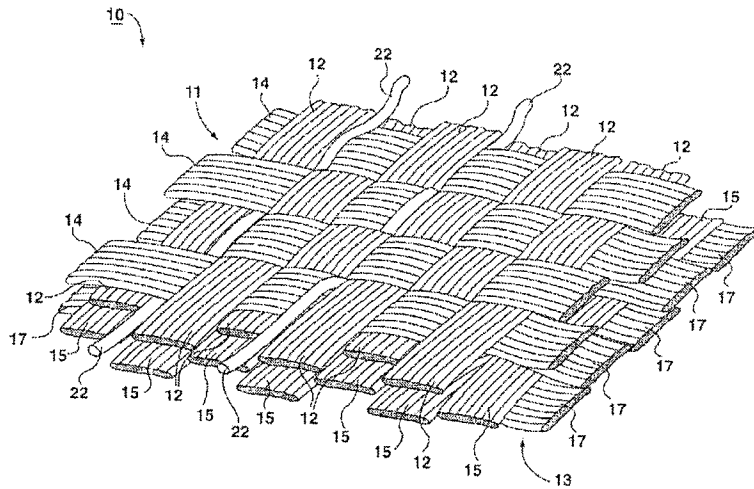
II. The Patents: The '261 and '379 patents are both titled "Woven Multi-Layer Fabrics and Methods of Fabricating Same." The '261 patent was issued in November 2013, and the '379 patent in September 2015.

The '261 patent claims a "multi-layer ballistic woven fabric" that is comprised of three components. First, there is "an upper woven layer having upper warp yarns and upper weft yarns that are

interwoven together." '261 patent, col. 10, lines 11-12. Second, there is "a lower woven layer having lower warp yarns and lower weft yarns that are interwoven together." '261 patent at col. 10, lines 13-14. Third, there is a "plurality of securing yarns." '261 patent, col. 10, line 15. Each securing yarn is "interwoven with at least some of the upper yarns and some of the lower yarns so as to secure the upper and lower woven layers together." '261 patent, col. 10, lines 15-18.

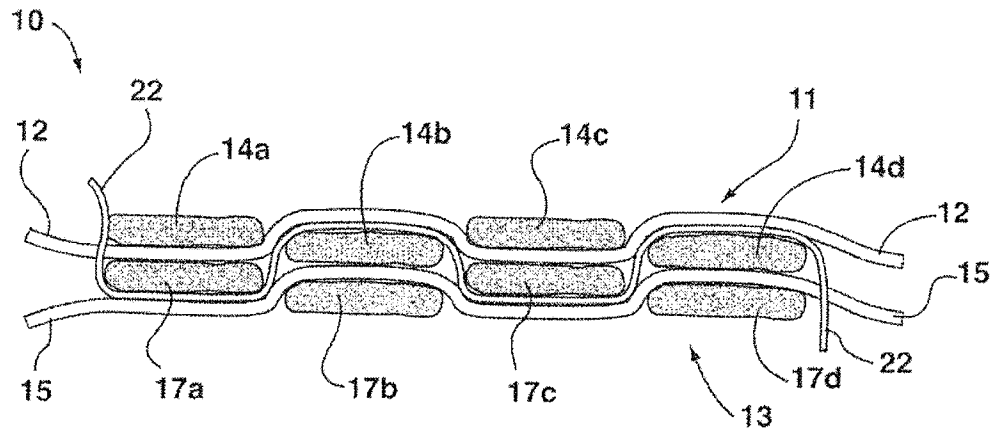
All of these components are formed together "by interweaving the securing yarns with the warp yarns and weft yarns as the upper woven layer and lower woven layer are made." '261 patent, col. 10, lines 20-22. As a result of this process, "at least some of the upper yarns and lower yarns are offset from each other so as to overlap by between 10% and 95%." '261 patent, col. 10, lines 23-25. The specification calls this pattern an "offset weave." '261 patent, col. 6, line 29.

Some examples from the specifications may be helpful in understanding the claim terms. Figure 1 shows an "overhead perspective view of [the] multi-layer woven fabric." '261 patent, col. 1, lines 55-56.



'261 patent, fig. 1 (caption omitted). From this perspective, one can see that the fabric as a whole (10) is composed of an upper woven layer (11) (which is itself composed of upper weft yarns (14) and upper warp yarns (12)), and a lower woven layer (13) (which is itself composed of lower weft yarns (17) and lower warp yarns (15)). Distinct securing yarns (22) snake their way through both layers and secure them together.

Figure 2 illustrates a cross-sectional view of the fabric with no offset weave, so that the upper and lower yarns are stacked directly on top of each other:

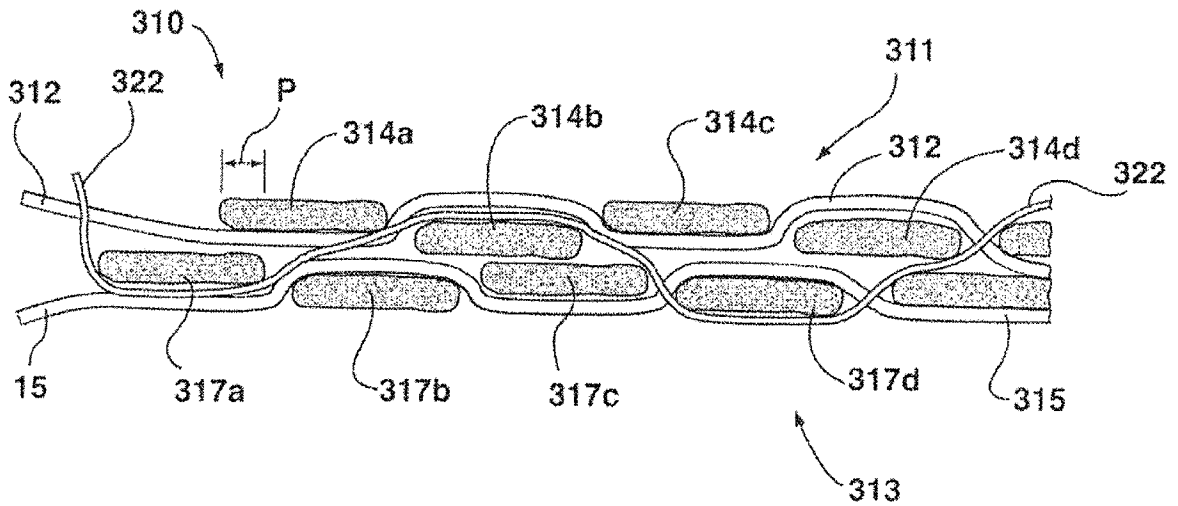


'261 patent, fig. 2 (caption omitted). The specification explains the various aspects of Figure 2:

As shown, (from left to right on FIG. 2) one of the securing yarns 22 extends from above the upper layer 11 and passes underneath a first lower weft yarn 17a (of the lower weft yarns 17), then over a second upper weft yarn 14b (of the upper weft yarns 14, and generally next to or adjacent the first lower weft yarns 17a), then underneath a third lower weft yarn 17c (generally next to or adjacent the second upper weft yarn 14b), and then above a fourth upper weft yarn 14d (generally next to or adjacent the third lower weft yarn 17c) and then extends below the lower layer 13. In this manner the securing yarn 22 tends to secure the upper weft yarns 14 and the lower weft yarns 17 together, thus joining the first woven layer 11 and the second woven layer 13.

'261 patent, col. 3, lines 11-25.

Figure 6 shows an embodiment of the fabric with an offset weave:



'261 patent, fig. 6 (caption omitted). Unlike in Figure 2, in Figure 6 each upper weft yarn is no longer stacked directly on top of a lower weft yarn; they are instead "offset so that, for example, the first upper weft yarn 314a overlaps the first lower weft yarn 317a by an overlap amount P." '261 patent, col. 7, lines 64-67. One can see a distinct securing yarn (labelled 322) weaving through the upper and lower layers to hold them together.

Per the specifications, this fabric design sets out to solve several problems that can arise when two woven layers are combined together "to produce a multi-layer structure." '261 patent, col. 1, line 30. One way to combine the layers is to manufacture each layer separately and then join them together with a resin. The specifications state that "there are several disadvantages to this technique," including higher manufacturing and labor costs, and possible incompatibility of the resin with the "ballistic threats

which [the fabric] might be subject to." '261 patent, col. 1, lines 32-33, 37. Another approach is to stitch the woven layers together after they have been manufactured. The dilemma associated with this approach is that the stitching may cause gaps in the fabric and damage to the yarns. A third approach is to weave "the yarns of one layer" with "the yarns of another layer." '261 patent, col. 2, lines 36-37. However, the specification criticizes this approach on the basis that "such interweaving tends to increase the degree of crimp for the yarn," which "can create ballistic weak points." '261 patent, col. 2, lines 36-39.

The '261 and '379 patents profess to avoid the problems associated with these other methods. By interweaving securing yarns "with the warp yarns and weft yarns as the fabric is formed," the "upper and lower woven layers can be secured together without the need for stitching, resin, or other mechanisms to join the woven layers together." '261 patent, col. 2, lines 47, 50-53 (internal citations omitted). Furthermore, "[m]anufacturing the fabric as a unified construction [] tends to provide a lower crimp level for each layer, which tends to maintain or improve potential ballistic performance of the individual layers while achieving additional advantages associated with securing the layers together, such as higher integrity, enhanced trauma and overall

ballistic performance as well as manufacturing advantages." '261 patent, col. 2, lines 58-64.

The '379 patent is a continuation patent, i.e., "an application whose specification is the same as that of the parent application, but whose claims may be . . . different from those of the parent application." Robert J. Goldman, SCHWARTZ'S PATENT LAW & PRACTICE 32 (8th ed. 2015). As is relevant to the Markman issues, the '379 patent adds new claims beyond those contained in the '261 patent, but the specification is otherwise identical.

III. The Disputed Claims

A. The '261 Patent: The '261 patent discloses 25 claims. Claims 1 and 3, and certain terms found therein, are disputed by the parties. Those claims are set forth below, with the disputed terms highlighted:

1. A multi-layer ballistic woven fabric, comprising:
 - a. an upper woven layer having upper warp yarns and upper weft yarns that are interwoven together;
 - b. a lower woven layer having lower warp yarns and lower weft yarns that are interwoven together; and
 - c. a plurality of **securing yarns**, each **securing yarn** interwoven with at least some of the upper yarns and some of the lower yarns so as to secure the upper and lower woven layers together;
 - d. wherein the multi-layer ballistic woven fabric is formed by interweaving the securing yarns with the warp yarns and weft yarns as the upper woven layer and lower woven layer are made;
 - e. and wherein at least some of the upper yarns and lower yarns are offset from each other so as to overlap by between 10% and 95%.

. . . .

3. The multi-layer ballistic woven fabric of claim 1, wherein **at least some of the upper yarns and lower yarns are completely offset from each other so as to not overlap.**

'261 patent, col. 10, lines 10-25, 30-33. In other words, the parties dispute the meaning of (1) the term "securing yarns," (2) the phrase "formed by interweaving the securing yarns with the warp yarns and weft yarns as the upper woven layer and lower woven layer are made," (3) the phrase "at least some of the upper yarns and lower yarns are offset from each other so as to overlap by between 10% and 95%," (4) the term "offset," and (5) the phrase "at least some of the upper yarns and lower yarns are completely offset from each other so as to not overlap."³

B. The '379 Patent: The '379 patent includes 25 claims. As with the '261 patent, the parties' dispute centers on claims 1 and 3, which are reproduced below with the disputed terms bolded:

1. A multi-layer ballistic woven fabric, comprising:
a. an upper woven layer having upper warp yarns and upper weft yarns that are interwoven together;
b. a lower woven layer having lower warp yarns and lower weft yarns that are interwoven together;
c. a plurality of **securing yarns**, each **securing yarn** interwoven with at least some of the upper yarns and some of the lower yarns so as to secure the upper and lower woven layers together;

³ The parties previously identified a dispute concerning the term "woven layer," but they no longer dispute that term. Docket # 39 at 20.

d. wherein the multi-layer ballistic woven fabric is formed by interweaving the securing yarns with the warp yarns and weft yarns as the upper woven layer and lower woven layer are made; and further wherein at least some of the upper and lower yarns are offset from each other so as to overlap by more than 10%.

. . . .

3. The multi-layer ballistic woven fabric of claim 1, wherein at least some of the upper yarns and lower yarns are completely offset from each other so as to not overlap.

'379 patent, col. 10, lines 9-23, 28-31. The parties dispute the following terms: (1) the term "securing yarns," (2) the phrase "formed by interweaving the securing yarns with the warp yarns and weft yarns as the upper woven layer and lower woven layer are made," (3) the phrase "at least some of the upper yarns and lower yarns are offset from each other so as to overlap by more than 10%," (4) the term "offset," and (5) the phrase "at least some of the upper yarns and lower yarns are completely offset from each other so as to not overlap." See also note 3, supra.

Pursuant to Markman, the parties ask the Court to construe the disputed terms used in these claims.

DISCUSSION

I. General Principles regarding Claim Construction: In Markman v. Westview Instruments, Inc., the Supreme Court held that

"construction of a patent, including terms of art within its claim, is exclusively within the province of the court." 517 U.S. 370, 372 (1996); see also Teva Pharm. USA, Inc. v. Sandoz, Inc., 574 U.S. 318, 321 (2015) (reaffirming Markman even where the construction of a term has "evidentiary underpinnings"). Because the meaning of claim terms is often "the central issue of patent litigation," and because "most aspects of trial hing[e] on this determination ... a conscientious court will generally endeavor to make this ruling before trial." Loral Fairchild Corp. v. Victor Co. of Japan, Ltd., 911 F. Supp. 76, 79 (E.D.N.Y. 1996) (citing Markman) (quotation omitted). Indeed, it is confusing and "improper for counsel to argue conflicting claim constructions to the jury." ART+COM Innovationpool GmbH v. Google Inc., No. 1: 14-217-TBD, 2016 WL 2945194, at *1 (D. Del. May 20, 2016) (citing Cytologix Corp. v. Ventana Med. Sys., Inc., 424 F.3d 1168, 1172 (Fed. Cir. 2005)). Thus, at the pre-trial stage, the court "has considerable latitude in determining when to resolve issues of claim construction." Cytologix Corp., 424 F.3d at 1172 (citing Jack Guttman, Inc. v. Kopykake Enters., Inc., 302 F.3d 1352, 1361 (Fed. Cir. 2002)). A court may, for example, "revisit[] and alter[] its interpretation of the claim terms as its understanding of the technology evolves." Jack Guttman, Inc., 302 F.3d at 1361.

In determining how to construe claim terms, "the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification, and, if in evidence, the prosecution history." Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). "Such intrinsic evidence is the most significant source of the legally operative meaning of disputed claim language." Id. Often, "an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term" and, in such circumstances, reliance on extrinsic evidence such as expert testimony is "improper." Id. at 1583. However, "there is no magic formula or catechism for conducting claim construction." Phillips v. AWH Corp., 415 F.3d 1303, 1324 (Fed. Cir. 2005). Courts are not obligated to consider any particular source in any particular order, so long as the sources considered "are not used to contradict claim meaning that is unambiguous in light of the intrinsic evidence." Id. (citations omitted). "The construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." Profectus Tech. LLC v. Huawei Tech. Co., Ltd., 823 F.3d 1375, 1380-81 (Fed. Cir. 2016).

Generally, courts should give claim terms their ordinary and customary meaning, unless the patentee chooses to define them in

a specific manner. Vitronics, 90 F.3d at 1582. Terms are to be construed consistently across related patents. See, e.g., SightSound Techs., LLC v. Apple Inc., 809 F.3d 1307, 1316 (Fed Cir. 2015).

Ordinary and customary meaning refers to the "meaning that a term would have to a person of ordinary skill in the art in question at the time of the invention." Howmedica Osteonics Corp. v. Zimmer, Inc., 822 F.3d 1312, 1320 (Fed. Cir. 2016) (internal quotation marks omitted). However, if the patentee chooses to be its own lexicographer, the specified definitions assigned to particular words or terms must be found either in the specification or the file history. Vitronics, 90 F.3d at 1582. Accordingly, it is necessary to review the specification to determine if any specialized meanings have been given to terms used in the patent. Id. The specification "is always highly relevant to the claim construction analysis" and is often dispositive; "it is the single best guide to the meaning of a disputed term." Phillips, 415 F.3d at 1315 (quoting Vitronics, 90 F.3d at 1582).

II. The Term "Securing Yarns" in the '261 and '379 Patents: As a general matter, the parties agree that, for purposes of the '261 and '379 patents, "securing yarns" are yarns that serve the function of holding the upper and lower woven layers together.

What they dispute is whether the term applies to a warp or weft yarn from the upper or lower layer when such yarn is serving that function.

Barrday argues that any yarn that is performing the function of securing the two layers together is a "securing yarn" for purposes of the patents.⁴ Thus, a "securing yarn" is defined to include either "(a) yarns distinct from the warp and weft yarns [when those yarns are holding the layers together]" or "(b) one or more of the warp or weft yarns themselves," in those embodiments where the warp or weft yarns are "securing or holding [the] upper and lower woven layers together." Docket # 39 at 8, 10.

Lincoln, on the other hand, contends that the term "securing yarns" refers to a special kind of yarn that is "distinct and separate from the warp and weft yarns of the 'upper' and 'lower' woven layers." Docket # 36 at 13; see id. ("The securing yarns and the yarns of the upper/lower layers clearly cannot be one and

⁴ Barrday's primary argument is that the term "securing yarns" is so clear and unambiguous that construction is not even necessary. See, e.g., Docket # 39 at 8. This argument merits only brief comment. Barrday has not presented any evidence to suggest that the term "securing yarns" has a "widely accepted meaning" either among laypersons or those within the field. O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1360 (Fed. Cir. 2008). Indeed, Barrday is not so much arguing that "securing yarns" is a "commonly used term[]" with a "well-accepted plain definition[]," id. at 1361, but that its meaning is readily inferable from the words themselves, the claim language, and the other intrinsic evidence. Those are not reasons to avoid claim construction – they are the very issues that the Court must consider at the claim-construction stage. Claim construction is therefore necessary. See id. at 1362 ("When the parties present a fundamental dispute regarding the scope of a claim term, it is the court's duty to resolve it.").

the same."). Under Lincoln's proposed construction, a "securing yarn" is a supplementary yarn that is interwoven with, but distinct from, the upper and lower warp and weft yarns.

The Court has carefully reviewed the claim language, the specifications, the parties' briefs, and the other materials they have submitted. Although the specifications provide no explicit definition of the term "securing yarns," the indicia of meaning found in the intrinsic evidence consistently and disproportionately favors Lincoln's construction. Because Lincoln's proposed construction "stays true to the claim language and most naturally aligns" with the intrinsic evidence, Profectus Tech. LLC, 823 F.3d at 1380-81, it is the construction the Court adopts.

A. The Claim Language: The Court begins with the claim language itself. See Phillips, 415 F.3d at 1314. Barrday's "multi-layer ballistic woven fabric" is made up of three, separately itemized components: an upper woven layer (made up of warp and weft yarns); a lower woven layer (made up of warp and weft yarns); and a "plurality of securing yarns" that are interwoven with the upper and lower warp/weft yarns "so as to secure" the layers together. '261 patent, col. 10, lines 9-17. In short, claim 1 of both patents identifies the warp and weft yarns

as the objects which make up each woven layer, and it separately identifies the securing yarns as the objects that hold those layers together. See id.

From this claim language, one would reasonably infer that the "securing yarns" are conceptually distinct components from the warp and weft yarns. The claim lists "securing yarns" as one element of the multilayer fabric, and the warp/weft yarns as another. See Becton, Dickinson & Co. v. Tyco Healthcare Grp, LP, 616 F.3d 1249, 1254 (Fed. Cir. 2010) ("Where a claim lists elements separately, the clear implication of the claim language is that those elements are distinct components of the patented invention." (internal quotation marks and brackets omitted)); HTC Corp. v. Cellular Comm'ns Equip., LLC, 701 F. App'x 978, 982 (Fed. Cir. 2017) (summary order) ("The separate naming of two structures in the claim strongly implies that the named entities are not one and the same structure."); see, e.g., SandBox Logistics LLC v. Proppant Express Investments LLC, 813 F. App'x 548, 555-56 (Fed. Cir. 2020) (summary order) ("That the 'structural support members' are recited separately from the 'end walls' and 'side walls' implies that the 'structural support members' are a structurally distinct component."). Furthermore, the securing yarns are identified as being "interwoven with" the warp and weft yarns of the woven layers, which suggests that a securing yarn is not itself a warp

or weft yarn. See, e.g., Regents of Univ. of Minn. v. AGA Med. Corp., 717 F.3d 929, 935-36 (Fed. Cir. 2013) (construing claim for medical device with two disks that were "affixed" or "joined" together, and concluding that such language implied two distinct disks); Comcast Cable Comm'ns, LLC v. Promptu Sys. Corp., 838 F. App'x 551, 552-53 (Fed. Cir. 2021) (summary order) (construing claim for "[a] program system controlling at least part of a speech recognition system coupled to a wireline node," and concluding that "speech recognition system" and "wireline node" were "distinct elements" because the claim "list[ed] the elements separately" and "[used] the word 'coupled'"). Conversely, there is nothing in the content or structure of claim 1 to suggest that the securing yarn and warp/weft yarns are or can be one and the same. See CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co., 224 F.3d 1308, 1317 (Fed. Cir. 2000) ("In the absence of any evidence to the contrary, we must presume that the use of ... different terms in the claims connotes different meanings.").

The claim language therefore favors Lincoln's reading. The Court now turns to the remainder of the specifications. See Phillips, 415 F.3d at 1315 ("[C]laims must be read in view of the specification, of which they are a part." (internal quotation marks omitted)).

B. Discussion and Disparagement of Prior Art: The specifications' discussion of prior art is instructive. See ResQNet.com, Inc. v. Lansa, Inc., 346 F.3d 1374, 1380 (Fed. Cir. 2003) (stating that, while not dispositive, "portions [of the specification] relating to extant problems in prior art" may be used to "confirm[] the meaning of claim language"). Both patents purport to provide a method of securing two or more woven layers together that avoids the problems that arise with other methods, like resin or stitching. More importantly, the specifications explicitly criticize the method that Barrday now claims its patents cover – namely, interlacing the warp/weft yarns of one layer with the warp/weft yarns of the other layer:

Generally the yarns of one layer are not interwoven with the yarns of another layer because such interweaving tends to increase the degree of crimp for the yarn in relation to [the] rest of the yarns in the fabric, which can create ballistic weak points. In particular, the first or upper yarns 12, 14 [of figure 1] are not interwoven with the second or lower yarns 15, 17 and vice versa. Instead, as shown, the first or upper layer 11 and second or lower layer 13 are secured together by one or more securing yarns 22.

'261 patent, col. 2, lines 36-43.

This language strongly supports Lincoln's construction. The distinction this passage draws between fabrics in which warp and weft yarns are interlaced and fabrics in which "securing yarns" are used suggests that the former is not identical to the latter. To the contrary, the patents state that one of the functional

advantages of using "securing yarns" in a multilayer fabric is that it yields a "lower crimp level for each layer," unlike interlacing warp and weft yarns, which "tends to increase the degree of crimp." '261 patent, col. 2, lines 37-38, 59. This contrast signals that a "securing yarn" is not an interlaced warp or weft yarn; otherwise, it would make no sense to compare the two and disparage the latter.⁵ This conclusion is reinforced in the same column when – directly after disparaging the use of warp and weft yarns to secure the layers together – the specifications declare that the use of securing yarns obviates "the need for stitching, resin or other mechanisms." '261 patent, col. 2, lines 51-52 (emphasis added).

At the hearing, Barrday argued that this passage simply reflects one embodiment of the invention, i.e., an embodiment in which distinct securing yarns are used in lieu of "warp and weft"

⁵ See, e.g., In re Abbott Diabetes Care Inc., 696 F.3d 1142, 1148-49 (Fed. Cir. 2012) (concluding that term "electrochemical sensor" did not include "external cables and wires connecting the sensor to its control unit," where specification "contain[ed] only disparaging remarks with respect to the external cables and wires of the prior-art sensors" and such construction was inconsistent with the stated benefits of the invention); Forest Labs., LLC v. Sigmapharm Labs., LLC, 918 F.3d 928, 933 (Fed. Cir. 2019) (agreeing that claim should be limited to "buccal and sublingual formulations," where specification "explain[ed] the benefits of sublingual and buccal treatment over prior art"); Rembrandt Patent Innovations, LLC v. Apple, Inc., 716 F. App'x 965, 972 (Fed. Cir. 2017) (summary order) (relying on specification's "criticism of prior art recovery methods that involved human intervention" as support for interpretation that patent's process was "conducted without human intervention"); Koepnick Med. & Educ. Research Found., L.L.C. v. Alcon Labs., Inc., 162 F. App'x 967, 971 (Fed. Cir. 2005) (summary order) (invention for refractive eye surgery did not encompass laser ablation, where, inter alia, description "repeatedly distinguish[ed] the invention from procedures involving lasers" and lasers did not have the invention's purported advantages).

securing yarns. This argument ignores the syntax of the passage: fabrics in which upper and lower warp/weft yarns are interlaced together are conceptualized as something different than fabrics in which "securing yarns" are used — hence the use of the word "instead" to distinguish between the two. See '261 patent, col. 2, lines 36-46 ("[T]he yarns of one layer are not interwoven with the yarns of another layer Instead, as shown, the first or upper layer and second or lower layer are secured together by one or more securing yarns." (internal citations omitted; emphases added)). Because the Court must infer the meaning of the term "securing yarns" through its use in context, see In re Abbott Diabetes Care Inc., 696 F.3d 1142, 1150 (Fed. Cir. 2012), this syntax is relevant and favors Lincoln's construction.

C. Term's Use in the Specifications: More broadly, throughout the specifications, "securing yarns" are treated as conceptually distinct elements from warp and weft yarns. Below are a number of illustrative excerpts from the '261 patent specification:

The securing yarns generally form part of the woven fabric. In particular, the woven fabric is formed by interweaving securing yarns with the warp yarns and weft yarns as the fabric is formed.

'261 patent, col. 2, lines 47-50 (citations omitted).

[I]n some embodiments the securing yarns may be aligned with the warp or weft yarns. For example, the securing yarns may be generally parallel to or aligned with the warp yarns and generally perpendicular to the weft yarns. In other embodiments, the securing yarns may be generally parallel to or aligned with the weft yarns and generally perpendicular to the warp yarns.

'261 patent, col. 2, lines 65-67, col. 3, lines 1-4 (citations omitted).

Each of the warp yarns and weft yarns and securing yarns may include a plurality of fibers or filaments of one or more materials

'261 patent, col. 3, 43-45 (citations omitted).

The ratio between securing yarns and ballistic yarns (e.g. warp and weft yarns) as well as the spacing therebetween tends to depend on the desired inter-layer stability

'261 patent, col. 3, lines 58-61 (citations omitted).

In some embodiments, the securing yarns are generally of significantly smaller denier than the warp yarns and/or weft yarns.

'261 patent, col. 4, lines 23-25 (citations omitted).

In one example, the securing yarns are made of a 78 dtex Nylon, while the warp yarns and weft yarns may be made of a 3000 denier aramid.

'261 patent, col. 4, lines 34-37 (citations omitted).

In some examples, the denier of the securing yarns may range from between about 20 denier (or less), to about 1000 denier, depending on the size of the warp yarns and weft yarns and the desired ballistic applications.

'261 patent, col. 4, lines 38-41 (citations omitted).

[T]he securing yarns are interwoven with the warp and/or the weft yarns as the fabric is being made (e.g., as the

weft yarns and warp yarns are being woven together)
. . . .

'261 patent, col. 7, lines 37-40.

While none of this language can be said to be dispositive of the issue, all of it is consistent with the notion that a securing yarn is different from a warp or a weft yarn. That is why a securing yarn can have different characteristics than the warp or weft yarns, like a different denier or material, and can be weaved into a variety of arrangements in relation to the warp and weft yarns. In addition, the Court notes that all of the securing yarns shown in the specifications' drawings are distinct, separate yarns – not warp or weft yarns. See Docket # 32-1 at 4-8, 10-13; see also Ferguson Beauregard v. Mega Sys., LLC, 350 F.3d 1327, 1338 (Fed. Cir. 2003) (stating that the ordinary and customary meaning of a claim term may be determined by reviewing a variety of sources, including the patent drawings); Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1324 (Fed. Cir. 2002) ("The words used in the claims are interpreted in light of the intrinsic evidence of record, including the written description, the drawings, and the prosecution history, if in evidence."); Advanced Tech. Incubator, Inc. v. Sharp Corp., No. 07-CV-468, 2009 WL 749911, at *13 (E.D. Tex. Mar. 11, 2009) (citing Federal Circuit cases for the proposition that "drawings are a part of the

intrinsic evidence that may be used to inform this Court's construction of the terms in [a] patent").

D. Passage at Col. 3, Lines 35-42: Perhaps the most decisive language in the specifications comes in the following paragraph:

In some embodiments, one or more of the warp yarns and/or weft yarns could be used in addition to, or in place of, one or more securing yarns for holding the two or more layers together. For example, one or more the [sic] of the warp yarns and/or weft yarns could be interwoven along a path similar to the path of the securing yarn . . . to secure the first layer to the second layer.

'261 patent, col. 3, lines 35-42 (citations omitted). Both parties seize on this language. Barrday argues that it "plainly contradicts Lincoln's construction" since it "describes embodiments in which yarns from the upper and lower woven layers are used as the securing yarns." Docket # 32 at 16. Lincoln responds that "this passage actually undermines Barrday's construction." Docket # 36 at 21. In Lincoln's view, "[t]he phrase 'in addition to, or in place of' presupposes that the securing yarns and the yarns of the upper/lower layers are not the same"; one would not say that warp/weft yarns would be used "in addition" to securing yarns if "the term 'securing yarns' includes" warp/weft yarns. Id.

The Court agrees with Lincoln. To be sure, as Barrday argues, this passage undoubtedly describes an embodiment in which "one or more" warp/weft yarns are generally performing the function of a

securing yarn, insofar as they are holding the woven layers together. This embodiment suggests that a warp or weft yarn can sometimes act as a substitute for a securing yarn.⁶

But the relevant question is one of definition, not function. What does the term "securing yarn" mean, and, more specifically, does that term refer to a warp or weft yarn that is used to secure the layers together? To answer that question, the Court must examine how the term is used in the specifications. Vitronics Corp., 90 F.3d at 1582 (stating that the specification "acts as a dictionary when it . . . defines terms by implication").

With the issue so framed, the Court has little hesitancy agreeing with Lincoln's interpretation of this passage. While this section indicates that a securing yarn can be substituted with a warp or weft yarn in some embodiments, it does not suggest that the term "securing yarn" refers to such a warp or weft yarn. The syntax of the passage implies the opposite: by stating that a warp or weft yarn may be used "in addition to" or "in place of" a securing yarn, the passage indicates that the two are not one and the same. Cf. Bancorp Servs., L.L.C. v. Hartford Life Ins. Co., 359 F.3d 1367, 1373 (Fed. Cir. 2004) ("[T]he use of [two] terms in close proximity in the same claim gives rise to an inference that

⁶ But recall that, based on the specifications, warp and weft yarns perform that function poorly in comparison to a distinct securing yarn: interlacing warp and weft yarns to hold the layers together tends to "increase[] the degree of crimp" and "create ballistic weak points." '261 patent, col. 2, lines 36-39.

a different meaning should be assigned to each."); Intel Corp. v. Tela Innovations, Inc., No. 18-CV-2848, 2019 WL 5697922, at *9 (N.D. Cal. Nov. 4, 2019) ("The Patents [] describe [a] relationship between the different structures, which would not be necessary if they were part of the same structure."). If Barrday's construction were correct, the passage would likely be written differently: "In some embodiments, the warp yarns and/or weft yarns could be used as the securing yarns for holding the two or more layers together"; or, "In some embodiments, the securing yarn is the warp yarn and/or weft yarn, which is interwoven so as to hold the two or more layers together." Like the section at column 2, lines 36-46, this passage draws a conceptual distinction between, on the one hand, warp and weft yarns that are used to hold the layers together, and, on the other hand, "securing yarns." Therefore, this section further supports Lincoln's proposed construction that a securing yarn must be separate and distinct from the warp or weft yarns making up the woven layers.

One issue does arise given the Court's interpretation: if a "securing yarn" is not defined to include a warp or weft yarn that is used to secure layers together, does that mean that the embodiment identified at column 3, lines 35-42 is excluded from Barrday's claims? Under the broadest interpretation of the embodiment, it may be. Nevertheless, this potential problem does

not alter the Court's analysis. The Federal Circuit has stated that normally, courts should not "interpret claim terms in a way that excludes embodiments disclosed in the specification." Oatey Co. v. IPS Corp., 514 F.3d 1271, 1276 (Fed. Cir. 2008) (collecting cases). This is not an unyielding rule, however. Where there is "probative evidence on the contrary," id. at 1277, a Court may interpret a term even if it excludes an embodiment. Moreover, the Federal Circuit's admonition against excluding an embodiment is most acute when it is a preferred embodiment. SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd., 983 F.3d 1367, 1379 (Fed. Cir. 2021) ("Our case law generally reflects the understanding that there is a stronger, though still not absolute, implication that a claim will cover preferred embodiments."). If the embodiment is not preferred, the Federal Circuit has recognized that a "court must not allow the disclosed embodiment to outweigh the language of the claim, especially when the court's construction is supported by the intrinsic evidence." Id. (internal quotation marks omitted).

Here, the specifications do not identify this embodiment as preferred, and so the Court does not find its exclusion to be a particularly weighty consideration. See id. (the doctrine that a claim should be interpreted to "cover preferred embodiments" was "inapplicable" in case where the specification did not designate

"any particular embodiment [as] preferred"); see also TIP Sys., LLC v. Phillips & Brooks/Gladwin, Inc., 529 F.3d 1364, 1373 (Fed. Cir. 2008) (collecting cases and noting that "[o]ur precedent is replete with examples of subject matter that is included in the specification, but is not claimed").

Accordingly, the Court agrees with Lincoln that this passage further supports its construction of the term "securing yarns," notwithstanding that said construction may exclude an embodiment identified in the specification.

E. Claims 10-14 of the '379 Patent: The only language that Barrday cites that unambiguously favors its position is found in claims 10 through 14 of the '379 patent:

10. The multi-layer ballistic woven fabric of claim 1, wherein the securing yarns include one or more of the upper warp yarns, the lower warp yarns, the upper weft yarns and the lower weft yarns.
11. The multi-layer ballistic woven fabric of claim 1, wherein the securing yarns include one or more of the upper warp yarns and the upper weft yarns.
12. The multi-layer ballistic woven fabric of claim 1, wherein the securing yarns include one of more of the lower warp yarns and the lower weft yarns.
13. The multi-layer ballistic woven fabric of claim 1, wherein the securing yarns include one of more of the upper warp yarns and the lower warp yarns.
14. The multi-layer ballistic woven fabric of claim 1, wherein the securing yarns include one or more the upper weft yarns and the lower weft yarns.

'379 patent, col. 10, lines 52-67.⁷ Relying on these claims, Barrday asserts that "[b]ecause independent claim 1 is, by definition, broader than dependent claims 10-14," then "securing yarns" must be defined more broadly to include "yarns distinct from the warp and weft yarns (as in some embodiments)" and "one or more of the warp or weft yarns themselves (as in other embodiments)." Docket # 39 at 10. The Court is not persuaded.

It is true that "the usage of a term in one claim can often illuminate the meaning of the same term in other claims." Phillips, 415 F.3d at 1314. The fact that, under claims 10 through 14, a "securing yarn" can "include" a warp or weft yarn may arguably favor Barrday's construction of the term. Still, a comparison between independent and dependent claims is but one potential source for a term's meaning; it is not conclusive and should not be used to override the more plausible meaning of a term. See Enzo Biochem Inc. v. Applera Corp., 780 F.3d 1149, 1156 (Fed. Cir. 2015) ("[D]ependent claims cannot broaden an independent claim from which they depend."); see also Howmedica Osteonics Corp. v. Zimmer, Inc., 822 F.3d 1312, 1323 (Fed. Cir. 2016) ("Claim differentiation is not conclusive; it is a guide, not a rigid rule."). Furthermore, the "probative value" of a

⁷ Claims 22 and 25 of the '379 patent contain similar language and are not probative for the same reasons discussed herein.

dependent claim in defining the scope of an independent claim is vitiated where "the motive for creating the dependent claim appear[s] to be litigation-driven." Thermapure, Inc. v. RxHeat, LLC, No. 10-CV-8157, 2015 WL 110075, at *6 (N.D. Ill. Jan. 7, 2015); see also ICU Med., Inc. v. Alaris Med. Sys., Inc., 558 F.3d 1368, 1376 (Fed. Cir. 2009) (agreeing that broader construction of independent claim was unwarranted where dependent claim was added only after "the introduction of the allegedly infringing [] products"); Volcano Corp. v. St. Jude Med., Cardiovascular & Ablation Techs. Div., Inc., No. 13-CV-687, 2014 WL 266155, at *4 n.3 (D. Del. Jan. 24, 2014) (stating that claim differentiation is less probative where "the patentee seeks to use [the doctrine] to expand the claim scope years after the patent was originally filed").

In this case, Barrday's motive for adding claims 10 through 14 appears to be litigation-driven. In a letter dated March 10, 2015, Lincoln's counsel notified Barrday that Lincoln's ballistic fabrics do not infringe on the '261 patent because (1) Lincoln interpreted the '261 patent to require distinct "securing yarns" to secure the woven layers, and (2) Lincoln's fabrics do not use "securing yarns" so defined. Docket # 42-2 at 3. Less than one month later, on April 2, 2015, Barrday filed paperwork with the USPTO to amend the then-pending application for the '379 patent in

order to add claims 10 through 14. See Docket # 42-3 at 5, 10. The reasonable inference from this course of conduct is that Barrday added this language to advance its litigation position; neither in the briefing nor at oral argument did Barrday claim otherwise.

For that reason, the language of claims 10 through 14 is less probative of the meaning of the term "securing yarns" than Barrday asserts. Accord Unimed Pharms., LLC v. Perrigo Co., No. 13-CV-236, 2015 WL 1094601, at *9 (D. Del. Mar. 11, 2015). And even leaving aside Barrday's motive for adding those dependent claims, the fact remains that the specifications clearly distinguish "securing yarns" from warp/weft yarns that are used to secure woven layers together. Given the intrinsic evidence, the Court declines to let the "dependent claim tail [] wag the independent claim dog." N. Am. Vaccine, Inc. v. Am. Cyanamid Co., 7 F.3d 1571, 1577 (Fed. Cir. 1993).

F. Importation of a Limitation: Finally, Barrday criticizes Lincoln's construction on the basis that it "imports" a limitation into the claims. Docket # 32 at 7. The Court can quickly dispose of this argument.

The Federal Circuit has recognized that two bedrock claim-construction principles "are often in some tension with one

another." Sealant Sys. Int'l, Inc. v. TEK Global, S.R.L., 616 F. App'x 987, 992 (Fed. Cir. 2015) (summary order). One is the principle that a "patentee is generally entitled to the full scope of his claims, and [a court should] not limit him to his preferred embodiment or import a limitation from the specification into the claims." Id. The other is that a court must construe a claim term "not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Phillips, 415 F.3d at 1313. The distinction between permissibly "using the specification to interpret the meaning of a claim" and impermissibly "importing limitations from the specification into the claim" is "a difficult one to apply in practice." Id. at 1323.

In this case, the term "securing yarns" is not expressly defined in the patents, and neither party claims that it has a well-defined meaning within the field. Where, as here, "the ordinary meaning of [a] non-technical term is sufficiently broad and amorphous," "recourse to the written description" of the patent is appropriate. Bell Atl. Network Servs., Inc., 262 F.3d at 1269-70; Sealant Sys., 616 F. App'x at 993. A court does not err merely because, after reviewing the intrinsic evidence to discern a term's meaning, it adopts the more limited construction. See, e.g., TF3

Ltd. v. Tre Milano, LLC, 894 F.3d 1366, 1372 (Fed. Cir. 2018); Enzo Biochem, 780 F.3d at 1156.

As discussed above, the specifications consistently treat "securing yarns" as an element distinct from the woven layers (and the yarns thereof), and they explicitly distinguish between the method of using "securing yarns" and the method of interlacing warp/weft yarns to hold the layers together. The specifications' consistent usage of the term defines it "by implication," and that implication favors Lincoln's construction. Bell Atl. Network Servs., Inc., 262 F.3d at 1271.

G. Conclusion: The '261 and '379 patents claim a multilayer fabric in which two or more woven layers are secured together through "securing yarns." From the claim language to the drawings and detailed description, the specifications consistently refer to "securing yarns" as a conceptually distinct kind of yarn from the warp and weft yarns that make up the woven layers. Moreover, while acknowledging that they perform similar functions, the specifications explicitly distinguish the use of securing yarns from the use of warp and weft yarns to secure the woven layers together. Lincoln's proposed construction is more consistent with this intrinsic evidence, and for that reason the Court adopts it.

Accordingly, the Court construes the term "securing yarns" to mean "yarns, other than yarns from the upper and lower woven layers, that secure⁸ the upper and lower woven layers together."

III. Remaining Disputed Terms: The parties ask the Court to construe several other disputed terms. For two reasons, the Court is disinclined to do so at this time.

First, at the hearing, Lincoln's counsel argued that its multilayer fabrics do not use distinct securing yarns but are instead secured together by the warp and weft yarns of the woven layers. Thus, adoption of its proposed construction of the term "securing yarns" would result in a finding of noninfringement.⁹ Assuming Lincoln is correct, it is unnecessary for the Court to construe the remaining terms. The Federal Circuit has recognized that Markman does not demand any particular procedure: while a court may find "it useful to . . . issue orders comprehensively construing the claims in issue," if the court "considers one issue to be dispositive, [it] may cut to the heart of the matter and need not exhaustively discuss all the other issues presented by

⁸ Lincoln proposes using the verb "tie" rather than "secure," but the Court agrees with Barrday that "tie" adds nothing to the language and, if anything, renders it more ambiguous. See Docket # 39 at 8-9.

⁹ When questioned as to whether this issue was dispositive, Barrday's counsel did not take a position one way or the other.

the parties." Ballard Med. Prods. v. Allegiance Healthcare Corp., 268 F.3d 1352, 1358 (Fed. Cir. 2001). So long as "the trial court construes the claims to the extent necessary to determine whether the accused device infringes, the court may approach the task in any way that it deems best." Id.; see, e.g., Carrier Vibrating Equip., Inc. v. Gen. Kinematics Corp., No. 10-CV-5110, 2012 WL 4483815, at *11 (N.D. Ill. Sept. 27, 2012) (construing dispositive term and declining to construe remaining disputed term); BAE Sys. Elecs. Ltd. v. Rockwell Collins, Inc., No. 03-CV-694, 2004 WL 1809812, at *6 (N.D. Tex. Aug. 12, 2004) (same).

Second, the Court is not convinced that the remaining terms should be construed without further discovery concerning the allegedly infringing products. While it is true that claims should not be "construed with reference to the accused device," that rule does not forbid "awareness of the accused product or process to supply the parameters and scope of the infringement analysis, including its claim construction component." Wilson Sporting Goods Co. v. Hillerich & Bradsby Co., 442 F.3d 1322, 1331 (Fed. Cir. 2006). Indeed, because a court need only construe terms "to the extent necessary to resolve the controversy," it is permissible for a court and the parties to "consider[] the accused product in order to identify the claim terms material to infringement." Choon's Design, LLC v. Idea Village Prods. Corp., 776 F. App'x

691, 695 n.3 (Fed. Cir. 2019) (summary order) (quoting Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999)); see also GPNE Corp. v. Apple Inc., 830 F.3d 1365, 1372 (Fed. Cir. 2016) ("[The district court] is under no obligation to address other potential ambiguities that have no bearing on the operative scope of the claim.").

In this case, Lincoln has raised several thorny issues concerning how to construe the terms related to the offset weave. At the hearing, the parties disputed whether some of those issues were material to infringement or merely hypothetical. Part of the problem is that the parties have not conducted full discovery, so Barrday has not fully investigated issues like how Lincoln's fabrics are manufactured and what their precise offset percentage (i.e., "P" value) is. The answers to those questions may bear on Barrday's ultimate theories of infringement, which, in turn, may bear on whether and to what extent the Court must construe the disputed terms.

Consequently, as to the remaining terms, claim construction is better undertaken at a time when both sides have a full understanding of the relevant facts and circumstances and can clearly and precisely articulate their positions. See, e.g., Sofamor Danek Grp., Inc. v. DePuy-Motech, Inc., 74 F.3d 1216, 1221 (Fed. Cir. 1996) ("Markman does not obligate the trial judge to

conclusively interpret claims at an early stage in a case. A trial court may exercise its discretion to interpret the claims at a time when the parties have presented a full picture of the claimed invention and prior art."); Financeware, Inc. v. UBS Fin. Servs., No. 11-CV-5503, 2011 WL 6092311, at *3 (S.D.N.Y. Dec. 7, 2011) (declining to hold Markman hearing until after discovery, when the parties would have "a full understanding of the issues and terms in dispute and [would] be well-equipped to articulate their positions").

For these reasons, the Court preliminarily intends to recommend to District Judge Vilardo the following plan: (1) Lincoln should be granted leave to move for summary judgment on noninfringement grounds in light of the Court's construction of the term "securing yarns"; (2) should summary judgment be denied, the parties should be given leave to complete all outstanding discovery; and (3) with the benefit of full discovery, the parties should be permitted to renew their requests for claim construction of the remaining disputed terms.

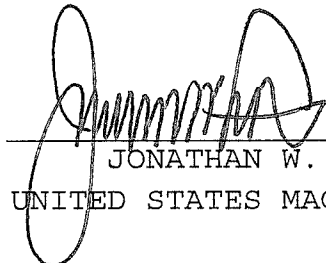
CONCLUSION

For the reasons stated above, the Court adopts in substantial part Lincoln's proposed construction of the term "securing yarns," and construes it to mean: "yarns, other than yarns from the upper

and lower woven layers, that secure the upper and lower woven layers together." The Court declines to address the remaining disputed terms at this time.

The parties may wish to be heard on how they intend to proceed in light of the Court's construction of the term "securing yarns." Before the Court transfers this case back to Judge Vilardo¹⁰ for further proceedings, it will hear from the parties. Accordingly, **prior to August 11, 2021**, the parties shall meet and confer regarding how this case should proceed. On **August 11, 2021**, at **10:00 a.m.**, the Court will hold a status conference by videoconference with lead counsel for the parties. The Court will issue any necessary orders thereafter.

SO ORDERED.



JONATHAN W. FELDMAN
UNITED STATES MAGISTRATE JUDGE

Dated: Rochester, New York
July 21, 2021

¹⁰ Judge Vilardo's Referral Order (Docket #58) referred the claims construction proceeding to the Court pursuant to 28 U.S.C. § 636(c). Absent further consent, this case will be returned to Judge Vilardo to hear and determine any summary judgment motion, and a new magistrate judge will be assigned to oversee any discovery that may occur.